



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,084	11/19/2001	Peng Jiang	1789-09300	9640

23505 7590 06/04/2004

CONLEY ROSE, P.C.
P. O. BOX 3267
HOUSTON, TX 77253-3267

EXAMINER

METZMAIER, DANIEL S

ART UNIT	PAPER NUMBER
----------	--------------

1712

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

CF

Office Action Summary

Application No.

09/992,084

Applicant(s)

JIANG ET AL.

Examiner

Daniel S. Metzmaier

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
 Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/15/2003; 03/03/2004; 3/15/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-21, 30-42 and 44 is/are pending in the application.
- 4a) Of the above claim(s) 12-15, 18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-11, 16-17, 20-21, 30-42 and 44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 10-21, 30-42 and 44 are pending.

Allowable Subject Matter

1. The indicated allowability of claims 30-42 is withdrawn in view of the newly discovered reference(s) to Zakhidov et al, US 6,261,469. Rejections based on the newly cited reference(s) follow.

Election/Restrictions

2. Applicant's election without traverse of Group I, 10-21, 30-42 and 44; and the species of "metallic" species of claim 16 in Paper filed April 29, 2003 is acknowledged. The claims reading on the elected invention and species include 10-11, 16-17, 21, 30-42 and 44.

3. Claims 12-15, 18 and 19 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper filed April 29, 2003.

Priority

4. Applicant claim benefit of an earlier filing date under 35 U.S.C. 119(e) to Provisional Application 60/249,781, filed Nov. 17, 2000. Since Nov. 17, 2001 was a Saturday, the instant filing date on Monday, Nov. 19, 2001, is proper.

Drawings

5. New corrected drawings are required in this application because drawing correction is no longer being held in abeyance. See attached Form PTO-948.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 10-11, 16, 20-21, 30-42 and 44 are rejected under 35 U.S.C. 102(e)¹ as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Zakhidov et al., US 6,261,469. Zakhidov et al (column 6, lines 33 et seq, examples and claims; particularly claims 14 and 25) discloses methods of making an inverse opal structure and structures therefrom employing said inverse opal as a template. Zakhidov et al discloses said process at column 6, lines 33 et seq. Step I (lines 34-36) comprises assembling the monodispersed spherical silica in an opal-like lattice (A). Step II (lines 42-45) comprises joining the monodispersed silica in an opal-like lattice. Step III (lines 48-53) comprises infiltrating said opal-like lattice with (B). Step IV (lines 58-61) comprises removing the opal-like lattice (A). Zakhidov et al (column 7, lines 14 et seq) discloses the further processing of the inverse opal as a volumetric template for the deposition of material C followed by removal of material B.

Zakhidov et al (column 11, lines 44 et seq) discloses the particular choice of materials B and C depend on the application need and include as specific examples the use of metals and optical materials. Zakhidov et al (column 15, lines 45 et seq; and column 16, lines 60-63) discloses the formation of metallic photonic bandgap materials employing patentees' process. The ellipsoidal colloids read on and would have been

¹ Zakhidov et al, US 6,261,469, has an effective filing date of October 13, 1998.

expected for the ordered materials with a lattice formed from sintering. Said structure would be expected to follow through the templating to the final materials formed.

To the extent Zakhidov et al differs from applicants' claims in a lack of the particular species set forth specifically in an example of the Zakhidov et al reference, it would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ the materials taught and suggested in the Zakhidov et al reference for the application need as taught therein at column 11, lines 43 et seq..

Response to Arguments

10. Applicant's arguments with respect to claims 10-11, 16-17, 20-21, 30-42 and 44 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (703) 308-0451. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1712

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel S. Metzmaier
Primary Examiner
Art Unit 1712

DSM